

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: D. Shenai-Khatkhate

U.S.S.N.: Not Yet Assigned

Art Unit: Not Yet Assigned

FILED: Herewith

Examiner: Not Yet Assigned

FOR: GERMANIUM COMPOUNDS

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications or other information submitted for consideration by the Examiner are listed on the PTO-1449 form, attached hereto.

II. COPIES

Submitted herewith is a legible copy of (i) each U.S and foreign patent or English abstract of foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.

III. CONCISE EXPLANATION OF THE RELEVANCE

All of the patents, publications or other information are in the English language or were cited in an English language Search Report, a copy of which is attached hereto (concise explanation not required).

FEES

IV. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b)
(check one box)

- a. ☒ within three months of the filing date of a national application (37 C.F.R. § 1.97(b) (1)). No fee or certification is required.
- b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b) (2)). No fee or certification is required.
- c. ☐ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b) (3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below, or, if no certification has been made, charge our deposit account a fee in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p).

V. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c) (1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c) (2)).

- a. ☐ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
or
- b. ☐ See the certification below. No fee is required.

VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby certifies that

- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

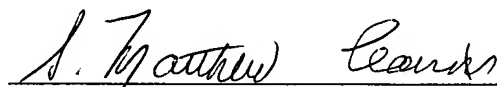
☐ Enclosed please find a check in the amount of \$ _____ for the above indicated fee.

☐ Please charge Deposit Account No. 04-1105 in the amount of \$180.00 for the above-indicated fee. A triplicate copy of this paper is attached.

☒ No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition, if necessary) and charge the appropriate fee to Deposit Account No. 04-1105.

Respectfully submitted,



S. Matthew Cairns (Reg. No. 42,378)
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Boston, MA 02205
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FORM PTO-1449				ATTY DOCKET NO.		SERIAL NO.	
INFORMATION DISCLOSURE STATEMENT				52139		Not Yet Assigned	
				APPLICANT(S): Shenai-Khatkhate			
				FILING DATE: Herewith		ART UNIT: Not Yet Assigned	
UNITED STATES PATENT DOCUMENTS							
EXAM. INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPR
	AA	2,444,270	06/29/1948	E. Rochow			
	AB	3,446,824	05/27/1969	K. Moedritzer			
	AC	4,506,815	03/26/1985	Melas et al.			
	AD	3,470,220	09/30/1969	Moedritzer et al.			
	AE	5,120,394	06/09/1992	Mukai			
	AF	5,502,227	03/26/1996	Kanjolia et al.			
	AG	5,755,885	05/26/1998	Mikoshiba et al.			
	AH	6,099,903	08/08/2000	Kaloyeros et al.			
	AI	6,214,729	04/10/2001	Uhlenbrock et al.			
	AJ	6,238,734	05/29/2001	Senzaki et al.			
	AK	6,306,217	10/23/2001	Uhlenbrock et al.			
	AL	6,391,803	05/21/2002	Kim et al.			
	AM	6,444,038	09/03/2002	Rangarajan et al.			
	AN	6,444,041	09/03/2002	Vaartstra			
	AO	6,444,818	09/03/2002	Uhlenbrock et al.			
	AP	6,492,711	12/10/2002	Takagi et al.			
	AQ	6,509,587	01/21/2003	Sugiyama et al.			
	AR	6,514,886	02/04/2003	U'Ren			
	AS	2003/0082300	05/01/2003	Todd et al.			
	AT	2003/0111013	06/19/2003	Oosterlaken et al.			
Examiner:				Date:			

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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN YES/NO
	BA	626,398	04/15/1946	United Kingdom			
	BB	1 160 355 A2	12/05/2001	Europe			
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)							
	CA	Dittmar et al., Cyclopentadienyl Germanes as Novel Precursors for the CVD of Thin Germanium Films, Chem. Vap. Deposition 2001, 7, No. 5, pp. 193-195.					
	CB	Harrison et al., "Predeposition Chemistry Underlying the Formation of Germanium Films by CVD of Tetravinylgermane", Chem. Mater. 1994, 6, pp. 1620-1626.					
	CC	Hoffman et al., "Plasma-enhanced chemical vapor deposition of silicon, germanium, and tin nitride thin films from metalorganic precursors", J. Vac. Sci. Technol. A 13(3), May/Jun 1995, pp. 820-825.					
	CD	O. Johnson, "The Germanes and Their Organo Derivatives", Chem. Rev. 1951, 48, 259, pp. 259-297.					
	CE	Kidd et al., "Germanium-73 Nuclear Magnetic Resonance Spectra of Germanium Tetrahalides", Journal of American Chemical Society, 95:1, January 10, 1973, pp. 88-90.					
	CF	H. Ohshima, "Organo-germanium adsorption on a silicon surface by excimer light irradiation", Applied Surface Science 107 (1996) pp. 85-89.					
	CG	Bottei et al., "Organogermanium Chemistry", Chem. Rev. (1951), 48, 259, pp. 403-442.					
	CH	Sulkes et al., "Molecular beam study of possible CVD intermediates from Group-14 organometallic precursors", Chemical Physics Letters 318 (2000) pp. 448-453.					
	CI	D. Smith, "Structural Properties of heteroepitaxial germanium-carbon alloys grown on Si (100); Philosophical Magazine A, 2001, Vol. 81, No. 6, pp. 1613-1624.					
	CJ	Todd et al., "Influence on Precursor Chemistry on Synthesis of Silicon-Carbon Germanium Alloys", Mat. Res. Soc. Symp. Proc. Vol. 377, 1995, pp. 529-534.					
Examiner:				Date:			